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WHEAT IN THE WEST AND THE WHEAT POOL

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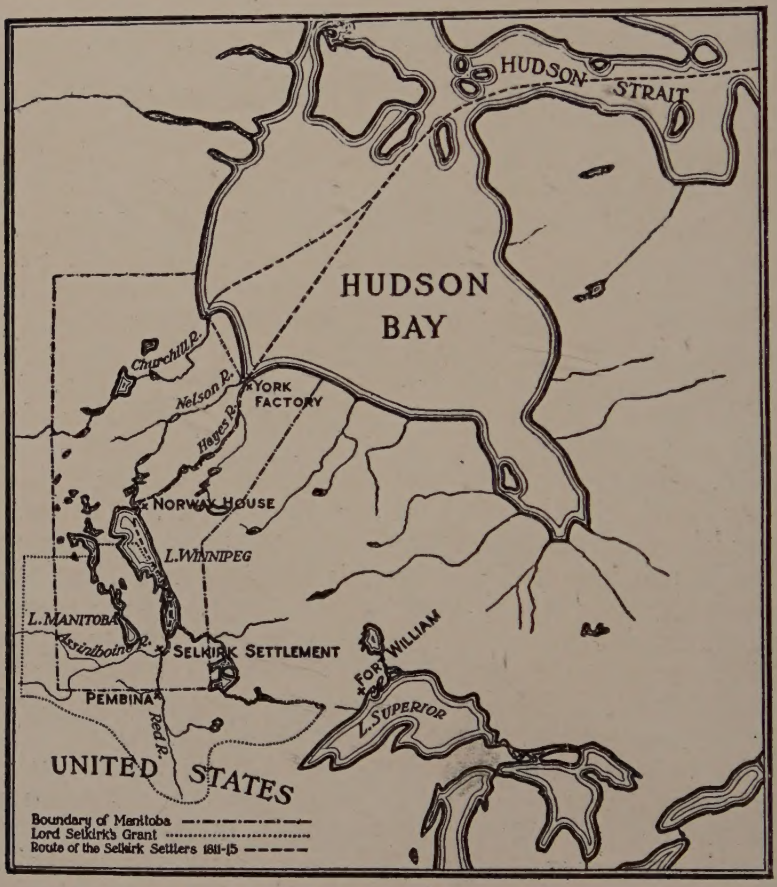
The First Wheat Crops in Western Canada. The earliest attempts at the cultivation of wheat in western Canada are associated with the vicissitudes of the Selkirk settlers and date from the year 1812. This little band of pioneers was sent out from Scotland by Lord Selkirk, *via* York Factory, to colonize 116,000 square miles of territory granted to him by the Hudson's Bay Company (Fig. 1). An advance party of twenty-two men under the direction of Miles Macdonell arrived at the junction of the Red and Assiniboine rivers on August 30, 1812; and there they founded the Red River Settlement. To make provision for the future, they at once began to turn up the sod; and part of the breaking was sown with winter wheat brought from their native land. Some spring wheat having the same origin was also sown early in 1813. In the autumn of that year, the settlers, whose number by this time had increased to nearly one hundred, were dismayed to find that the wheat harvest was a total failure. There was nothing to be done but to try again; but again Fortune refused to smile upon the newcomers, and the crop of 1814 was as bad as its predecessor. But Scottish persistency was to win in the end, for the third attempt at wheat-growing, made in 1815, was eventually brought to a successful conclusion.*

The failure of the first two crops of wheat was due partly to the fact that the earliest settlers to arrive at

*In writing this article the author has drawn freely upon his *Essays on Wheat* (1919, The Macmillan Co., New York), to which the reader is referred for fuller details and references to the literature.

the Red River were crofters who knew more of fishing than of farming, and partly to the absence of adequate farm implements. There was not a plough in the whole colony, the one harrow was incomplete and could not be used, and all the labour of breaking up and working



Map showing Lord Selkirk's grant of land, the route of the Selkirk settlers, 1811-15, and the present boundaries of the Province of Manitoba.

over the tough prairie sod had to be done with the hoe. The Indians looked on with surprise and amazement at the man with the hoe seeking to gain a sustenance from the soil, and to show his contempt for such work nicknamed the colonists "Jardiniers."

The first harvests stood in danger from the air, for each autumn flocks of birds, including the now extinct passenger pigeon, settled in the fields, and considerably diminished even such small crops as had been produced.

2. Troubles with the North-West Company. The Red River settlers, in the first few years of their history, had not merely to struggle with nature to provide themselves with their daily bread but also with their fellow men. The North West Company, who, as fur-traders, were the great rivals of the Hudson's Bay Company, resented the establishment of a civilized community in the heart of the Indian country: firstly, because it was planted directly across their main line of communication between the northwest and Montreal and, secondly, because it was situated on the very plains from which they drew their supplies of pemmican for their voyages from Fort William to the posts of the fur-trappers. The Company feared that the Settlement might eventually destroy the fur-trade, and they therefore determined to destroy the settlement.

In the spring of 1815, the Selkirk settlers sowed their wheat and barley; but many were the hardships to be borne before the crops could be reaped. In June, the North-Westers with their half-breed adherents overawed the colonists by a show of force. They trampled upon the crops, stole the horses, and burnt Fort Douglas, the colony mill, the stables and barns to the ground; and Miles Macdonell, the governor of the colony, surrendered himself as a prisoner. Most of the settlers left in North-West canoes for Upper Canada, and thirteen families made their way up Lake Winnipeg to Jack River and settled at a place now known as Norway House. John McLeod and three others, however, succeeded in weathering the storm and remained at the Forks. They stored what property they could in a single log-house and stoutly defended themselves with a three-pounder cannon fed with lengths of chain obtained from the adjoining blacksmith's shop. Their half-breed assailants, who were on horseback, could not face this piece of artillery and soon desisted from their attacks. In the

end, McLeod and his little garrison were left in peace to care for the crops and prepare for the return of their friends.

Colin Robertson, in charge of an expedition sent out by Lord Selkirk from Montreal, arrived at the Red River a few weeks after the expulsion of the colonists. On learning what had happened, he immediately pushed up Lake Winnipeg to the Jack River, persuaded the settlers to return, and brought them back in triumph. They were delighted to find that, during their absence, the crops had made good progress; and within a few weeks the first successful harvest was duly gathered in.

The new governor, Robert Semple, who had been sent out from Scotland by the Hudson Bay route, arrived at the Red River Settlement on November 3, 1815. On finding that there were one hundred and twenty persons committed to his care, he at once began to feel anxious about the food-supply for the winter. Straightway he went to the granary, where a rapid inspection revealed that the stores of grain consisted of from twelve to fourteen stacks of wheat and barley. Would this satisfy the needs of the settlers and keep famine from their doors until the next harvest? A resort to mathematics could alone settle the question. Taking each stack as representing 50 bushels, he calculated that he had 400 bushels of wheat plus 200 bushels of barley. From these 600 bushels he deducted 40 for spring seed and so had 560 left. Counting 50 pounds to the bushel, he calculated that the grain which could be used as food amounted to 28,000 pounds. He then reckoned that 120 persons at 2 pounds per day would consume 240 pounds per day, and that this was equal to 7,200 pounds per month or 28,800 pounds for 4 months—an amount of grain but little more than the 28,000 pounds he actually had at his disposal. And so the Settlement would be free from the trials of hunger throughout the winter of 1815-16. "How was my heart relieved," writes Semple to Lord Selkirk, "when I arrived at the end of this simple calculation which I tried again and again for fear of a mistake."

In the spring of 1816 the settlers sowed the forty bushels of seed wheat and barley which had been saved from the crop of the previous year, but alas for their hopes of harvest! Within a few short weeks, when every field was putting on its summer garb of green, the colony was to be broken up once more, and a goodly number of the settlers were to find their graves. The quarrel between the rival companies came to such a pass that, on June 19, a bloody combat took place between their forces. A boy on the watch-tower of Fort Douglas sighted a large gathering of hostile half-breeds; and Governor Semple and about thirty of his men went out to meet them. At a spot known as Seven Oaks, a few miles north of Winnipeg near the Red River, the two parties came together. The half-breeds were painted and disguised. Hot words were exchanged, a shot was fired, and in the fight which followed Governor Semple and twenty of his men were left dead upon the field. The rest of the settlers in bereavement and despair made their way up Lake Winnipeg and, after a long and wearisome journey, again took up their abode at Jack River. The North-Westers occupied Fort Douglas until the end of the year; and, after this second expulsion, no colonist was permitted to remain to gather in the crops.

Early in 1817, in the depth of winter, a force sent from Fort William by Lord Selkirk wrested Fort Douglas from the North-West Company. A surprise attack was made in the dead of night: the walls were scaled, and the sixteen men within were all made prisoners. When daylight came, the flag of the Hudson's Bay Company was again hoisted on the staff. With the arrival of spring, an express canoe was dispatched to Jack River with the news that Fort Douglas had been taken. The settlers were persuaded to return and, in the hope that peace might finally be established, resumed their agricultural pursuits. The facilities for tilling the soil were, however, extremely limited, and it was still necessary to use the hoe in place of the plow. Wheat was sown although late in the year and, owing to its scarcity, in small quantity. It grew well, but, in the autumn, the

crop was almost ruined by a violent hurricane. So short of cereals were the colonists during the winter of 1817-18 that they had to rely upon the buffalo as a chief source of food.

3. Visit of Lord Selkirk. Lord Selkirk, who was an experienced agriculturalist, arrived at the Settlement in the summer of 1817, and for four months exercised a wise and generous supervision over its affairs. His heart was in this work, for he had great visions of the future. His belief in the possibilities of the western prairie-land he once expressed in a remarkable prophecy: "It is a very moderate calculation to say that, if these regions were occupied by an industrious population, they might afford ample means of subsistence for thirty millions of British subjects." So anxious was Lord Selkirk to encourage agriculture that before his arrival, in 1815, he had authorized Semple and Robertson to offer on his behalf a prize of £50 to the farmer who should raise the largest quantity of grain in proportion to the number of hands employed.

Lord Selkirk left the Settlement on September 9, 1817, for Montreal, in order to answer charges brought against him at the instigation of the North West Company. The litigation in which he became involved affected his health, which he attempted to recover by a visit to Pau in France. There his end came on April 8, 1820; and the man whose indomitable spirit caused the sowing of the first fields of wheat in western Canada and who, with the insight of a seer, foresaw the present and the future agricultural prosperity of the far-spreading prairie-land, now lies buried in a French graveyard. The North West Company and the Hudson's Bay Company settled their differences by amalgamation in 1821, a year after Lord Selkirk's death.

4. The First Farms. The Red River Settlement, in the first few years of its existence, concentrated its farming operations in what is to-day known as the municipality of Kildonan. It was arranged that each settler should purchase one hundred acres of land at five shillings an acre, but Lord Selkirk relinquished his claim to pay-

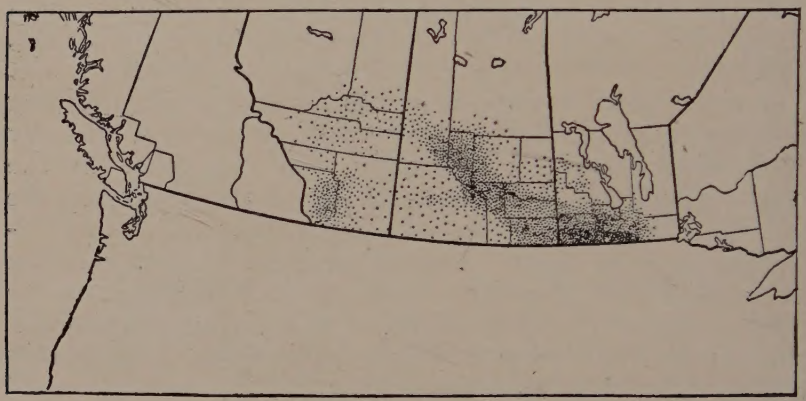
ment, when he visited the colony in 1817, in order to help the settlers who had suffered so much in the two previous years. For the purpose of giving each farmer access to the main highway—the Red River—and to secure the advantage of compactness for the colony as a whole, the farms were all made long and narrow with one end fronting on the water, and were placed side by side in a parallel series.

5. The St. Paul Railway. Soon after Manitoba had been organized as a province (1870), settlers began to pour in to it from the south. Immigrants from Ontario and the Old Country were compelled to come through the United States to Chicago, then northwest to St. Paul, and then northwards across 450 miles of level prairie. For eight years a stream of immigrants made the long journey into Manitoba by wagon, by coach, and by Red River steamer; and great was the relief to the traffic when at last, in 1878, the first railway entered the province from the south. This new means of communication gave a direct connection between St. Paul in Minnesota and the little town of St. Boniface on the right bank of the Red River. On arriving at railhead the settler, in order to get to Winnipeg, had merely to cross the river in a ferry boat.

6. The Canadian Pacific Railway. The St. Paul Railway was a great boon and formed a splendid link with the United States; but something still was lacking. The rising spirit of Canada, supported by the voice of Manitoba, demanded that an all-Canadian railway should be built across the continent, so as to give the West a direct connection with the East. This great project was eventually brought to a successful conclusion, with the result that in 1886 there took place an event of outstanding significance for the subsequent development of wheat-growing in western Canada: there passed through Winnipeg on Dominion Day, July 1, the first through train from Montreal to Vancouver. Its engine, *Canadian Pacific Railway No. 1*, ran upon a line of steel destined to bear to the country's ports hundreds of

millions of bushels of wheat required to satisfy the world's craving for bread.

A grain of wheat is a very tiny thing in itself, but the prosperity of western Canada is bound up with its existence; and it is not too much to say that without the grain of wheat in its collective form the great and thriving city of Winnipeg, with its population of 300,000 souls, its imposing buildings, its fine streets, and its busy cosmopolitan life, would scarcely have advanced at the present time beyond the status of a small trading station. The growth of Winnipeg from a village of 215



Combined acreage of spring-sown and autumn-sown wheat in western Canada. Each dot represents 5,000 acres. From *Geography of the World's Agriculture*, by V. C. Finch and O. E. Baker. Courtesy of the United States Department of Agriculture.

people in 1870 to its present proportions has been due in large measure to the construction of the Canadian Pacific Railway, the connecting of the east and west parts of Canada by a band of steel. Through mile after weary mile for hundreds of miles was the track pushed from the east, past lake and swamp and stream, onwards amid the lonely forests of pine and poplar, of spruce and birch, on, on, through all that long stretch of rocky boulder-strewn country north of the Great Lakes which was swept bare of soil in the dawn of human history, onwards and ever onwards, until at last it reached the west. All the vast difficulties in the path of the engineers were overcome because the men behind

the Canadian Pacific Railway were men of vision, men who could see in the mind's eye under the blue dome of heaven the golden grain which would come to clothe the fertile acres of the broad prairie-land. Surely the brightest dreams of the founders of the Canadian Pacific Railway have been amply justified by events.

The completion of the eastern half of the Canadian Pacific Railway immediately provided that direct connection with the Old Country market for which Manitoba had been longing; and soon the agricultural progress and prosperity of the west were assured. The tide of immigration grew ever stronger and Winnipeg became the great gateway to the new land of promise. The buffalo disappeared, the Indian gave place to the white man, and vast tracts of the virgin prairie were turned with the plough. The wheat of the prairie provinces, on account of its high quality, acquired universal fame, and Canada came to be called "the granary of the British Empire." How well that granary served the cause of the Allies in its time of trial needs no telling, for it is known to the whole world.

7. Wheat-growing at the Present Day. The rapid progress made by western Canada in recent decades is reflected by the crop returns, some of which are as follows:

1904	56,000,000 bushels
1906	102,000,000 "
1913	209,000,000 "
1915	360,000,000 "
1923	460,000,000 "
1928	511,000,000 "

In 1928 the western wheat crop was by far the largest on record. In 1929, owing to drought, the crop was reduced to about 271,000,000 bushels, but its quality was unusually high. Canada herself is able to use about 100,000,000 bushels, and thus the 1928 crop provided about 400,000,000 bushels of wheat for export. When it is remembered that as yet not one-half of the good agricultural land of the west is under the plough, the confidence of western Canadians in the future of their half of the Dominion seems to be well justified.

At the present time Canada is the greatest wheat-exporting country in the world, and in this respect now far surpasses her southern neighbour, the United States.

The chief wheat-growing province is Saskatchewan, after which comes Alberta and then Manitoba (1929). In Fig. 2 is reproduced a map, originally published in 1917, which shows the acreage sown to wheat in the three prairie provinces. In 1928 the total area under wheat in these provinces was 23,000,000 acres.

Winter wheat has a higher yield than spring wheat, wherever it can be successfully grown. However, on account of climatic conditions, very little winter wheat is grown in western Canada. In 1928 the acreage devoted to winter wheat in the west was only two-fifths of 1 per cent of the total wheat acreage. Manitoba, Saskatchewan, and Alberta must therefore be thought of as spring-wheat provinces.

The wheats sown in spring are hard red varieties, the chief sort being *Marquis*, which has now practically replaced the old standard *Red Fife*. The winter wheats sown in the autumn in Alberta are chiefly *Turkey Red* and *Kharkov*. In the drier parts of southern Manitoba and southern Saskatchewan, durum wheats (sold for making macaroni) are grown to a considerable extent, their culture having increased during the last few years owing to their being more resistant to the rust disease than bread wheats such as *Marquis*.

The virgin prairie is usually broken in the month of June. Its surface is then cultivated and left uncropped until the following spring. Thus the prairie grasses, etc., are prevented from growing and using up moisture, and the moisture is stored and conserved in the newly-broken land.

Until recently, but little or no attempt was made to apply manure or fertilizers to the land, and the grain fields were cropped year after year without anything being added to them. Of late, however, with the introduction of mixed farming, farm-yard manure has come to be commonly used, particularly on lighter soils. This practice has been found to increase the yield of the crops

on soils which have long been cultivated and thus to add to the profits of farming.

On account of the low rain-fall, moisture limits the yield of grain per acre. The bare fallow, or some modification of it, is therefore resorted to once in from two to five years, more often in the drier districts and less often in the more humid ones. The summer fallow is the basic practice of dry farming. Its purpose is to store moisture in the soil by means of a soil mulch created by surface tillage. The surface tillage breaks the capillary tubes in the soil and so lessens evaporation.

In older districts the summer fallow has a double function, for it is not only used to conserve moisture, but also to control weeds. Among the annual weeds which have proved to be pests are wild oats (*Avena fatua*) and various members of the Mustard family; and, among the perennials, Sow Thistle (*Sonchus arvensis*), Canada Thistle (*Cnicus arvensis*), and Quackgrass (*Agropyron repens*). The very dry parts of southern Alberta and Saskatchewan are troubled with the Russian Thistle (*Salsola Kali*). Practically all the noxious weeds of the west have been introduced directly or indirectly from Europe.

The seed-wheat, before being sown, is usually cleaned by passing through a fanning mill and then treated with formalin or copper-carbonate dust to kill any spores of the Stinking Smut Fungus (*Tilletia tritici*) which may be clinging to the kernels and which, if not destroyed, might germinate on the kernels in the soil, infect the seedlings, and cause smut-balls instead of sound kernels to be produced in the heads of the diseased plants.

The wheat grower endeavours to prepare the land to be sown so that it shall be well stored with moisture, free from weeds, firm, and mellow. After seeding in such soil at a depth of from one to three inches, the depth varying with the soil's moisture content, the land is generally firmed down by using a packer and then harrowed to create a mulch to lessen the evaporation of moisture. Seeding is accomplished by means of a large drill drawn by a team of horses or an engine, and as a

rule is completed between the middle of April and the tenth day of May. The crop usually heads out during the first half of July and ripens between the tenth of August and the twentieth of September.

The crop, in general, is harvested by means of self-binders drawn by horses or driven by a tractor. Each binder cuts a width of from six to eight feet and, at the same time, ties the grain into bundles or sheaves which are thrown to the ground. The sheaves are then placed in stooks or shocks by men who follow the binder as closely as possible. The grain is separated from the straw by means of large threshing machines driven by tractors and having a capacity of from 500 to 2,000 bushels per day.

Within the last two or three years some thousands of combined cutting and threshing machines, known as *combines*, have been introduced into western Canada. These machines, which are driven by tractors, cut and thresh the grain in a single operation, thus considerably reducing the harvesting period.

The harvesting and threshing season is the busiest part of the year in western Canada. To assist in relieving the labour shortage, which is always felt at this time, some 20,000 to 30,000 extra harvesters have been annually brought to the prairie provinces from the east of the Dominion and from the United States. In the summer of 1928, 10,000 additional harvesters came to western Canada from the British Islands.

The western plains, in general, are very level and free from large trees, and hence are easy to break with the plough. The soil is thick and rich in humus and gives a good crop from the first. The chief difficulties of wheat-raising arise from temporary droughts in summer, drying winds, early fall frosts, occasional severe attacks of the Black Stem Rust disease, and local hailstorms. Rain, however, seldom falls in too large a quantity, and the weather during the harvesting and threshing season is usually dry and bright. There is no more exhilarating sight in the west than the prospect of the binders at

work on the sea-wide sky-skirted prairie, with the golden grain gleaming under the August sun and above and about all the cloudless blue of the heavens. And when the last sheaf has been cut and the binders are silent, how splendid is the view across the gently rolling stubble fields; stook beyond stook, stook beyond stook, for a quarter of a mile, for half a mile, and still more stooks as far as the eye can see, stooks cresting the distant horizon, ten thousand stooks all waiting to be threshed and each with its promise of bread, the gift of the New World to the Old (Fig. 3).

8. Marquis Wheat. All the Marquis wheat in existence originated from a single grain planted by Dr. Charles Saunders in an experimental plot at Ottawa in 1903. Of this kind of wheat, in North America, 250,000,000 bushels were raised in 1917, 300,000,000 bushels in 1918, and upwards of 500,000,000 bushels in 1928. Marquis is the offspring of a cross between Red Fife (male parent) and Hard Red Calcutta (female), the former excelling in milling and baking qualities and the latter in earliness. Marquis yields more highly than Red Fife and other wheat varieties which it has replaced, and its productiveness was a factor of considerable help to the Allies in the Great War. Dr. Charles Saunders, who by discovering and introducing Marquis wheat increased the wealth of Canada and the United States by many millions of dollars, retired from his position as Dominion cerealist on account of ill-health a few years ago and is now residing at Ottawa. For his services to Canada he was rewarded by parliament with a special pension.

9. Elevators. To store the grain produced on the farm before it can be exported or otherwise used, special warehouses, known as *elevators*, are provided. The wheat is *elevated* into these buildings by machinery and deposited in bins. The bottom of the shipping bin is always situated at some distance above the level of the ground and opens into a movable spout on the exterior of the elevator. When it is desired to ship wheat away from an elevator, advantage is taken of the flowing property of grain in bulk: the spout is opened and the

grain falls through it by gravity and passes into a box-car or the hold of a steamer.

Elevators are of several kinds. There are *country elevators* along the railways for receiving grain from the farmers for storage before it has been inspected, *terminal elevators* which receive or ship grain and which are located at points declared to be terminal so far as inspection is concerned, *hospital elevators* which are used for cleaning or specially treating rejected or damaged grain and which are equipped with machinery for that purpose, and *mill elevators* which are used or operated as part of a plant engaged in the manufacture of grain products. In the Western Inspection Division of Canada, for the licence year 1928-29, there were 2,042 railway stations having elevators, the number of elevators was 5,585 (including 55 terminal elevators), and the total capacity of all the elevators together was 312,000,000 bushels.

A terminal elevator at Fort William or Port Arthur (Fig. 4) is situated upon the lake front, so that the grain which it contains may be passed directly into the hold of a lake steamer. It is usually divided into two parts: the *working house* and the *storage bins*. The working house is rectangular in shape, much higher than it is long or broad, and has numerous windows in its upper half. Here the wheat is received from the railway box-cars, elevated, weighed, temporarily stored in smaller bins, and cleaned. Here, too, are situated the shipping bins from which the wheat passes into the freight vessels. The storage bins, on the other hand, are great concrete cylinders which stand vertically upright and are connected by concrete where they are in contact. There may be several parallel rows of them. The space between every four adjacent cylinders is not wasted, but is used as a smaller bin. Running over the top of each row of bins is a passageway which leads from the upper part of the working house. The grain is conveyed along these passages and is deposited in the bins from above. Each bin can be filled from the bottom to the top, and a single cylinder may hold as much as 30,000 bushels of grain. Under each row of

WHEAT IN THE STOOK IN WESTERN CANADA

Courtesy of the Immigration and Colonization branch of the Government of the Province of Manitoba

THE SASKATCHEWAN WHEAT POOL TERMINAL ELEVATOR, NO. 7, AT FORT WILLIAM

The railway track is immediately behind the building and cannot be seen. The water in front is part of Lake Superior. The elevator has rows of storage bins to the right and left and the working house in the centre. The lake steamer to the right is being loaded: the wheat is flowing through the metal spouts into the hold. The lake steamer to the left is partially loaded, and may be waiting to take on another grade of wheat. Courtesy of the Canadian Wheat Pool.

bins there is a tunnel leading to the base of the working house. The wheat is let out of a bin through a hole in its base. The capacity of an elevator depends on the size and number of its cylindrical storage bins. The bins are cylindrical because engineers have found that cylindrical bins resist the pressure of the grain within better, and require less concrete in their frame, than bins of any other form. The different grades of wheat are kept in separate bins. When a car-load of wheat has been put in a bin with other wheat of the same grade, it loses its identity and cannot again be recovered. Wheat in a terminal elevator is therefore stored in bulk according to grade.

The passage of wheat through a terminal elevator is by far the cheapest and most efficient means of taking it from box-cars and getting it on board a lake freight-boat, for loading simply consists of letting the wheat out from a shipping bin through a spout so that it flows by its own weight into the hold. The rapidity with which the cargo boats can be loaded from a terminal elevator is truly astonishing. The average loading run to any boat is about 30,000 bushels an hour; but the record speed for loading at the head of the lakes is 142,000 bushels in one hour. This record was made at Fort William, at the Saskatchewan Wheat Pool Elevator, No. 7, the largest and most up-to-date terminal elevator in the world with a capacity of 7,000,000 bushels (Fig. 4). From the great bins of this elevator on October 4, 1929, in three and a half hours, there poured into the hold of the *Lemoyne* 500,000 bushels. Another hour was taken to trim the cargo and then the *Lemoyne* was ready to sail.

10. Sampling and Grading of Wheat. An essential element in the grain business of western Canada is the classifying or *grading* of grain by government inspectors. The wheat is bought, sold, transported, and stored in bulk according to grade. The work of grading is largely concentrated at Winnipeg. When a grain train from the west arrives at Winnipeg, a sample of wheat is obtained from each car and then taken to the Dominion inspection office. The inspectors there determine the

grade of wheat in each car from the sample supplied. During the busy season as many as 2,000 cars are often graded by the Winnipeg inspectors every day.

11. Vancouver and the Hudson Bay Route. The opening of the Panama Canal presented the possibility of shipping Canadian wheat to Europe from ports on the Pacific coast. In 1917, a test experiment was made with wheat loaded at Vancouver. A cargo of grain, with experts from the Dominion Grain Research Laboratory on board, was taken from Vancouver down the Pacific Coast, through the Panama Canal, and across the Atlantic to London, the voyage occupying three and a half months. This initial shipment of grain *via* the Panama Canal was successfully carried out, with the result that Vancouver in the past few years has been rapidly developing into a great grain-exporting port. During the crop-year 1928-29 this city exported some 95,000,000 bushels of western wheat; and, doubtless, in the future, this business is destined to grow. A great advantage enjoyed by Vancouver as compared with Montreal and Quebec lies in this: that, whereas the eastern ports are frozen up during the winter, the western one is open the whole year round.

At the present moment Canada's surplus wheat flows out from the country through ports on the Atlantic and Pacific Coasts, but shortly it will begin to flow out from the port of Churchill on the Hudson Bay. The sea route from Churchill to the British market is shorter than that from New York. The railway line from Saskatchewan through northern Manitoba to Churchill was completed on Good Friday, 1929, and it is expected that the export of wheat through the Hudson Bay will begin within a year from the present time.

12. The Wheat Pool. There are four wheat pools in western Canada: the Manitoba, the Saskatchewan, and the Alberta Wheat Pools; and these conjointly operate a Central Selling Agency commonly called the *Canadian Wheat Pool.* The Alberta Wheat Pool was organized in 1923, and the Saskatchewan and Manitoba Wheat Pools in 1924, in which year also the Central Selling Agency

came into being. The head office of this agency is in the Wheat Pool Building on Main Street, Winnipeg.

The farmer members of the Wheat Pool now number 140,000, and they raise wheat on 15,000,000 of the 23,000,000 acres devoted to wheat production in western Canada. The farmer members contract to deliver their wheat to the Pool for a period of five years, and at present the second contract period is in progress. The farmers deliver their wheat to the Pool and at once obtain an initial payment (usually $1.00 per bushel); and, when the crop has been sold some months later, they receive the balance due to them. Each pool member in the end receives the average price at which his grade of wheat was sold throughout the year. When the Pool began its work, it had no marketing facilities, but now (1930) it has acquired from old Line Elevator Companies and has built 1,636 country elevators with a capacity of 57,000,000 bushels; while, at the head of the lakes, it controls eight terminal elevators, with a capacity of 26,000,000 bushels, and, on the Pacific Coast (Vancouver and Prince Rupert), three terminal elevators, with a capacity of 8,000,000 bushels. To finance the upbuilding of its elevator system, the Pool, in accordance with its contract, deducts two cents per bushel from the selling price. By this means by August, 1930, the Pool will have accumulated a fund of $30,000,000.

Through the Pool the Canadian farmer sells his wheat directly to the foreign miller, thus eliminating the handling charges of many middlemen. In 1928-29, the Pool shipped 108,000,000 bushels of wheat to ninety ports in nineteen different countries.

The Pool is owned and controlled entirely by farmers and is the world's greatest non-profit producers' co-operative marketing association. It is attracting attention throughout the whole world, and it is not improbable that, within a few years, certain other countries will adopt its methods and form Pools of their own.